Blue Hill Memorial Hospital	**)**	**Departmental**
Hancock County	**)**	**Findings of Fact and Order**
Blue Hill, Maine	**)**	**Air Emission License**
A-543-71-E-A/R	**)**	

After review of the air emissions license renewal/amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Blue Hill Memorial hospital (BHMH) of Blue Hill, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their healthcare facility.

BHMH has also requested an amendment to their license in order to incorporate the addition of a new emergency diesel generator. With this incorporation the annual operational limit for each unit will be increased to reflect current Department guidance regarding stationary internal combustion engines and each shall be limited to 500 hours per year.

This license shall also include the licensing of a class IV-B medical waste incinerator that was originally planned to be dismantled. However, due to recent events regarding federal regulations, BHMH has decided to continue operation of this unit until a later date.

B. Emission Equipment

BHMH is authorized to operate the following equipment:

Fuel Burning Equipment

Equipment	**Maximum Capacity (MMBtu/hr)**	**Maximum Firing Rate (gal/hr)**	**Fuel Type, % sulfur**	**Stack #**
Boiler #1	4.2	28.55	#5 fuel oil @ 1.5%	1
Boiler #2	4.2	28.55	#5 fuel oil @ 1.5%	1
Boiler #3	2.1	13.85	#5 fuel oil @ 1.5%	1

Electrical Generation Equipment

Equipment	**Power Output (kW)**	**Firing Rate (gal/hr)**	**Stack #**
Diesel unit #1	200	14.6	2
Diesel unit #2*	200	16.2	2

*: this is a new unit scheduled for installation during the summer of 1999

Incineration Equipment

Class Incinerator	IV-B
No. of Chambers	2
Type of Waste	Type 7
Max. Design Combustion Rate	80 lb/hr
Auxiliary Fuel Input: **Primary Chamber (Btu/hr)** **Secondary Chamber (Btu/hr)**	 800,000 firing LP gas 1,500,000 firing LP gas
C. Emission Control	Afterburner

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

Pollutant	**Future License (TPY)**	**Sig. Level**
PM	0.13	100
PM_{10}	0.13	100
SO_2	0.06	100
NO_x	4.6	100
CO	1.0	100
VOC	0.37	50

This modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

B. BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

1. Diesel Unit #2

BHMH has proposed the installation of a new diesel unit to be used for emergency back-up power for the facility. This unit shall be limited to the firing of low sulfur diesel fuel with a maximum sulfur content not to exceed 0.05% by weight and an annual operational limit of 500 hours (based on a 12 month rolling total).

Therefore, based on the relatively small quantity of pollutants that will be emitted from this unit, diesel unit #2 will meet the requirements of BACT firing low sulfur diesel fuel in conjunction with the limited annual operation.

C. BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

1. Boilers #1, #2 and #3

BHMH operates boilers #1, #2 and #3 which each have a maximum design heat input of 4.2, 4.2, and 2.1 MMBtu/hr each, respectively, firing #5 fuel oil with a maximum sulfur content not to exceed 1.5% by weight. Boilers #1, #2 and #3 are Weil-McLain boilers manufactured in 1973 and are therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc for boilers with a heat input of 10 MMBtu/hr, or greater, and manufactured after June 9, 1989.

2. Diesel Unit # 1
BHMH operates diesel unit #1 for emergency back-up power at the facility. This unit shall be limited to the firing of low sulfur diesel fuel with a maximum sulfur content not to exceed 0.05% by weight and an annual operational limit of 500 hours (based on a 12 month rolling total).

3. Class IV-B Incinerator
BPT for the class IV-B incinerator shall consist of the following requirements:

Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1800^{o}F with a stack gas retention time, at or above 1800^{o}F, of at least 1.0 second.

To ensure an efficient burn and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1800^{o}F prior to commencing the burn cycle.

The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1800^{o}F for the duration of the burn cycle.

Installation and operation of a pyrometer equipped with a continuous chart recording device and a temperature test port at a location that will insure compliance with the temperature and retention time requirements.

A log will be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.

A maximum particulate emission rate of 0.10 gr/dscf corrected to 7% O_2 will be met.

Visible emissions from the incinerator shall not exceed 10% opacity based on a six (6) minute block average basis.

The ash will be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management.

The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

Pollutant	**Tons/Year**
PM	50
PM_{10}	25
SO_2	50
NO_x	100
CO	250

Based on the license allowed emissions from this facility, modeling and monitoring are not required for this license.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-543-71-E-A/R subject to the following conditions:

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. § 353.

(6) The license does not convey any property rights of any sort, or any exclusive privilege.

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

(i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or

b. pursuant to any other requirement of this license to perform stack testing.

(ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

(iii) submit a written report to the Department within thirty (30) days from date of test completion.

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

(i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

(ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

(iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

(16) Boilers #1, #2 and #3

A. Boilers #1, #2 and #3 shall be limited to the firing of #5 fuel oil with a maximum sulfur content not to exceed 1.5% by weight.

B. BHMH shall be limited to an annual fuel use limit of 100,000 gallons of fuel oil in boilers #1, #2 and #3 (based on a 12 month rolling total). A log shall be maintained documenting all fuel oil deliveries with receipt to include the sulfur content of each shipment.

C. Boilers #1, #2 and #3 shall each not exceed the following emission limits:

Equipment		**PM/PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**
Boiler #1	lb/MMBtu	0.12	-	-	-	-
	lb/hr	0.51	6.6	2.1	0.14	0.04
Boiler #2	lb/MMBtu	0.12	-	-	-	-
	lb/hr	0.51	6.6	2.1	0.14	0.04
Boiler #3	lb/MMBtu	0.12	-	-	-	-
	lb/hr	0.26	3.3	1.1	0.07	0.02

D. Visible emissions from boilers #1, #2 and #3 shall not exceed 30% opacity on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

(17) Diesel Units #1 and #2

A. Diesel units #1 and #2 shall each be limited to the firing of low sulfur diesel with a maximum sulfur content not to exceed 0.05% by weight. A log shall be kept documenting all diesel fuel deliveries with receipt to include the sulfur content of each shipment.

B. Diesel units #1 and #2 shall each be limited to an annual operational limit of 500 hours (based on a 12 month rolling total). A log shall be maintained documenting the hours of operation for each diesel unit.

C. Diesel units #1 and #2 shall each not exceed the following emission limits:

Equipment		**PM/PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**
Diesel unit #1	lb/MMBtu	0.12	-	-	-	-
	lb/hr	0.24	0.12	8.8	1.9	0.70
Diesel unit #2	lb/MMBtu	0.12	-	-	-	-
	lb/hr	0.26	0.13	9.7	2.1	0.77

D. Visible emissions from diesel units #1 and #2 shall each not exceed 20% opacity on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

(18) Class IV-B Incinerator

A. The class IV-B incinerator shall not exceed the maximum design combustion rate of 80 lb/hr. Auxiliary fuel input to the primary and secondary chamber shall not exceed 800,000 btu/hr and 1,500,000 btu/hr, respectively, firing LP gas.

B. The incinerator shall not exceed a particulate matter emission limit of 0.10 gr/dscf corrected to 7% O2 without the contribution of the CO2 from the auxiliary fuel. Therefore, based on the design feed rate and continuous operation of the class IV-B incinerator, emissions shall be limited to the following:

Pollutant	**gr/dscf**	**lb/hr**
PM/PM10	0.10	0.19
SO_2	-	0.23
NO_x	-	0.46
CO	-	0.23
VOC	-	0.23

C. Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1800^{o}F with a stack gas retention time, at or above 1800^{o}F, of at least 1.0 second.

D. To ensure an efficient burn and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1800^{o}F prior to commencing the burn cycle.

E. The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1800^{o}F for the duration of the burn cycle.

F. Installation and operation of a pyrometer equipped with a continuous chart recording device and a temperature test port at a location that will insure compliance with the temperature and retention time requirements.

G. A log will be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.

H. Visible emissions from the incinerator shall not exceed 10% opacity based on a six (6) minute block average basis.

I. The ash will be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management.

J. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

(19) Total Allowable Annual Emissions from the facility shall not exceed the following:

Pollutant	**Tons/Year**
PM	2.0
PM_{10}	2.0
SO_2	13.0
NO_x	10.5
CO	2.3
VOC	1.5

(20) The term of this license shall be five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 1999.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 24, 1999
Date of application acceptance: June 1, 1999

Date filed with the Board of Environmental Protection: _____

This Order prepared by Stephanie L. Carver, Bureau of Air Quality